EPOXY POWDER COATING

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Rev B, 20-Dec-1989

PURPOSE

This smooth finish is applicable to external metal products, requiring good abrasion resistance and/or corrosion protection, or other properties offered by this finish.

Use on products such as floor stands for systems, and stabilizer legs.

APPEARANCE QUALITY

Unless otherwise specified, this finish shall meet a quality level of 4. When viewed from the specified distance, the finish shall exhibit no gross imperfections of such nature that the viewer's attention is immediately focused on them.

When viewed in accordance with *DEC STD 092-1 Finish and Color Standard - Finish Standard for Applications*.

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APPROVAL:

Art Clockedile, Systems Materials Engineering

GLOSS

The gloss shall measure 18 ±5, using a 60-degree gloss meter per ASTM D523. Over smooth finish only.

COLOR

As specified in the specification number, and shall match the sample supplied by Digital Equipment Corporation.

PHYSICAL PROPERTIES

Film Thickness - Unless otherwise specified on the part drawing, the film thickness shall be 0.002 to 0.004 inch.

Adhesion (Cross Hatch Test Method) - Using a sharp knife, 11 parallel cuts shall be made in the finish 0.125 inch apart, and approximately one inch long, being sure the cuts penetrate to the base material. Eleven additional parallel cuts shall be made 0.125 inch apart, perpendicular to and crossing all the first 11 cuts. Scotch brand #600 tape shall be applied over this area, using uniform pressure.

There shall be no more than 5 % loss of film when the tape is swiftly pulled from the scribed area.

Adhesion (Tape Test Method) - Scotch brand #600 tape shall be applied on the surface with uniform pressure, and shall be removed in a quick motion at 90 degrees to the surface. For acceptance, the finish shall remain unbroken after the tape is removed.

Abrasion Resistance - Using a Tabor abraser with CS10 wheels, and a 1000-gram load, the weight loss shall not exceed 50 milligrams after 1000 cycles.

Solvent Resistance - Solvent resistance shall be tested in accordance with DEC STD 092-3, subhead 3.1, using MEK as the solvent.

The following three tests shall be done on Bonderite 1000 panels, with a two mil (0.002 inch) coating.

Impact - Using a Gardner impact tester, the coating shall withstand 80 inch-pounds both direct and reverse, without cracking, or loss of adhesion.

Salt Spray - Salt spray resistance shall be tested in accordance with *DEC STD 092-3 Finish and Color Standard - Finish Material Test Requirements*, main heading 2. The coating shall withstand 1000 hours salt spray.

Flexibility - Flexibility shall be tested in accordance with DEC STD 092-3, subhead 3.4, using a 1/4-inch diameter mandrel.

SURFACE PREPARATION

All surfaces (pretreatment) must be cleaned to render then free from grease, oil, rust, or any other contamination. Any standard cleaning method, such as alkaline cleaners, solvents, or vapor degreasing is acceptable it it does not harm the metal substrate.

Steel parts (refer to Digital specification 092-C25X-XXX) after proper cleaning shall be coated with a suitable iron phosphate or zinc phosphate prior to coating.

Aluminum, aluminum castings, and zinc castings shall be prepared for painting with a suitable iron or zinc phosphate or a chemical conversion coating per Digital specifications 092-C20C-XXX or 092-C28X-XXX.

Approved Material
Epoxy Powder IE-3466-2
DEC Color Number: 092-XXXX-217 Mid-Range Gray
Supplied by Farboil Co., Baltimore Md.

Approved Material
DEC Black Epoxy PC-21839
DEC Color Number: 092-XXXX-094 Lamp Black
Supplied by John L. Armitage and Co.

GENERAL REQUIREMENTS

a. Masking
Although masking is allowed, threaded holes, inserts, or studs, do not require masking prior to coating, unless specified on the drawing. However, the threaded hole, insert, or stud, must always accept its component part after coating.

b. Orange Peel
This coating may exhibit a slight orange peel affect, however, it shall not be visible at the specified viewing distance.

c. Pretreatment
All surfaces must be cleaned to render them free from grease, oil, rust, or any other contamination. Any standard cleaning method, such as alkaline cleaners, solvents, or vapor degreasing, is acceptable if it does not harm the metal substrate.

After proper cleaning, the steel parts shall be coated with a suitable iron phosphate or zinc phosphate prior to coating.

Aluminum castings, and zinc castings shall be prepared for coating with a suitable iron or zinc phosphate, or a chemical chromate conversion coating referenced in Digital specifications 092-C20X-XXX, and 092-C28X-XXX.